

**REMARKS**

The above preliminary amendment is made to remove multiple dependencies from claims.

Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at (952) 253-4106.

Respectfully submitted,

Altera Law Group LLC

Date: July 31, 2003

By:

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**APPENDIX A**  
**MARKED UP AMENDEMENTS TO THE SPECIFICATION AND CLAIMS**

**IN THE SPECIFICATION**

Please amend the specification as follows:

Please amend the paragraph on page 2, lines 7-14 as follows:

A voice-producing prosthesis [according to the preamble of claim 1] is known from EP-B-0 573 888. In this prosthesis a vibrations-generating element is placed in the shunt valve in the wall between the trachea and the esophagus. However, in this prosthesis the problem also occurs that the voice sounds substantially less natural and less understandable than that of a person with healthy, intact vocal cords.

Please amend the paragraph on page 3, lines 4-6 as follows:

[This] An object of the present invention is achieved according to the present invention by carrying out a voice-producing prosthesis [according to claim 1].

Please amend the paragraph on page 3, lines 17-18 as follows:

Very advantageous practical examples of the invention are laid down [in subclaims 2-14] herein.

Please amend the paragraph on page 3, lines 19-28 as follows:

According to a practical possibility of the invention, a one-way valve is disclosed herein [provided according to claim 15]. By incorporating a voice-producing prosthesis according to the invention as a modular part in such a valve, it is made possible with a limited number of variants of the valve and the prosthesis to achieve a high degree of adaptation to, on the one hand, the patient's stature and, on the other hand, the patient's original vocal properties. In principle, such a voice-producing prosthesis can be used in any valve between the trachea and the esophagus.

## IN THE CLAIMS

Please amend the claims 1-15 as follows:

1        1. (Currently Amended) A voice-producing prosthesis, comprising:  
2            a housing [(15; 45)] for placement in a passage [(5)] between the esophagus  
3            [(4)] or throat and an upper region of the trachea [(1)],  
4            a passage through said housing [(15; 45)] for passing air,[ and]  
5            at least one vibrantly movable vibrating element [(17, 18; 47; 77; 107, 108)]  
6            for vibrating air to produce sound having at least one base frequency, and  
7            [characterized by] at least one stop [(20, 21; 56-58; 110, 111)] for abruptly  
8            impeding the movability of the at least one vibrating element [(17, 18; 47; 77; 107,  
9            108)] in at least one position, the at least one vibrating element [(17, 18; 47; 77; 107,  
10            108)] being arranged to increase [the] sound volume and [the] base frequency with the  
11            intensity of an airflow through the passage.

1        2. (Currently Amended) A voice-producing prosthesis according to [any one of  
2            the preceding claims] claim 1, wherein the at least one vibrating element [(17, 18; 47;  
3            77)] is designed as a flexible lip projecting into or before the passage [(16; 46)].

1        3. (Currently Amended) A prosthesis according to according to [any one of the  
2            preceding claims] claim 1, wherein the vibrating element [(17, 18; 107, 108)] projects  
3            from a substantially immovable connection to the housing [(15)] in the passage [(16)],  
4            and wherein the stop [(20, 21; 110, 111)] is located opposite a portion of the vibrating  
5            element [(17, 18; 107, 108)] spaced from said immovable connection.

1       4. (Currently Amended) A prosthesis according to claim 3, wherein the stop  
2       [(20, 21; 110, 111)] is located opposite a portion [(21, 20; 110, 111)] of the vibrating  
3       element [(17, 18; 107, 108)] located near a free end thereof.

1       5. (Currently Amended) A prosthesis according to according to [any one of the  
2       preceding claims] claim 1, wherein the vibrating element [(17, 18; 107, 108)], in a  
3       condition of rest, abuts against said stop [(20, 21; 110, 111)].

1       6. (Currently Amended) A voice-producing prosthesis, comprising:  
2       a housing for placement in a passage between the esophagus or throat and an  
3       upper region of the trachea,  
4       a passage through said housing for passing air, and  
5       at least one vibrantly movable vibrating element for vibrating air to produce  
6       sound having at least one base frequency, [A prosthesis according to any one of the  
7       preceding claims,] wherein the vibrating element [(17, 18; 107, 108)], in the condition  
8       of rest, abuts against [said] a stop [(20, 21; 110, 111)] with pretension.

1       7. (Currently Amended) A voice-producing prosthesis, comprising:  
2       a housing for placement in a passage between the esophagus or throat and an  
3       upper region of the trachea,  
4       a passage through said housing for passing air, and  
5       at least one vibrantly movable vibrating element for vibrating air to produce  
6       sound having at least one base frequency, [A prosthesis according to any one of the  
7       preceding claims,] wherein [the] a stop [(20, 21; 110, 111)] is formed by a second  
8       vibrating element [(17, 18; 107, 108)].

1       8. (Currently Amended) A prosthesis according to [any one of the preceding  
2       claims] claim 1, wherein the vibrating element [(17, 18; 47)] is designed as a lip  
3       projecting from a wall of the passage [(16; 46)], a free end of said lip, in the condition  
4       of rest, being directed in a direction substantially parallel to the passage [(16; 46)].

1       9. (Currently Amended) A voice-producing prosthesis, comprising:  
2       a housing for placement in a passage between the esophagus or throat and an  
3       upper region of the trachea,  
4       a passage through said housing for passing air, and  
5       at least one vibrantly movable vibrating element for vibrating air to produce  
6       sound having at least one base frequency, wherein the at least one [A prosthesis  
7       according to according to claim 1, comprising] vibrating element [elements in the form  
8       of] comprising two mutually substantially identical lips [(17, 18)] which, in the condition  
9       of rest, abut against each other.

1       10. (Currently Amended) A voice-producing prosthesis, comprising:  
2       a housing for placement in a passage between the esophagus or throat and an  
3       upper region of the trachea,  
4       a passage through said housing for passing air, and  
5       at least one vibrantly movable vibrating element for vibrating air to produce  
6       sound having at least one base frequency,  
7       at least one stop for impeding vibration of the vibrating element, and [A  
8       prosthesis according to any one of the preceding claims further comprising] at least  
9       one passage [(22, 23)] along the at least one vibrating element [(17, 18; 107, 108)] for  
10      passing air along the at least one vibrating element [(17, 18; 107, 108)] in any position  
11      of the vibrating element [(17, 18; 107, 108)].

1       11. (Currently Amended) A prosthesis according to [any one of the preceding  
2       claims] claim 1, wherein the vibrating element [(17, 18; 47; 77; 107, 108)] is arranged  
3       to carry out displacements, resulting in air pulses, of which the first derivative shows  
4       discontinuities.

1       12. (Currently Amended) A prosthesis according to [any one of the preceding  
2       claims] claim 1, wherein the vibrating element [(17, 18; 47; 77; 107, 108)] is arranged  
3       to generate vibrations with a frequency spectrum of sinusoids comprising a base  
4       frequency and frequencies above, of which the intensity is lower by 10-14 dB/octave.

13. (Currently Amended) A voice-producing prosthesis, comprising:  
a housing for placement in a passage between the esophagus or throat and an  
upper region of the trachea,  
a passage through said housing for passing air, and  
at least one vibrantly movable vibrating element for vibrating air to produce  
sound having at least one base frequency, [A prosthesis to any one of the preceding  
claims] wherein the at least one vibrating element [(107, 108)] comprises a hollow  
space filled with a fluid or a soft substance [(120, 121)].

14. (Currently Amended) A prosthesis according to claim 13, wherein the fluid  
[(120, 121)] is a liquid.

15. (Currently Amended) A one-way valve for placement in a wall [(5)] between  
the esophagus [(4)] and the trachea [(1)] of a patient, comprising a housing [(12)] with a  
passage, [(11) and] a closing body [(13)] for closing said passage, and [(11), further  
comprising] a sound generating prosthesis [according to any one of the preceding  
claims] located in the passage [(11)].